DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
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WASHINGTON, D.C. 20350-2000

3900
Ser N766/2U646274
IN REPLY REFER TO
1 Feb 2002

MEMORANDUM FOR PROGRAM EXECUTIVE OFFICER THEATER SURFACE COMBATANTS (PEO TSC)

Subj: SURFACE COMBAT SYSTEM BASELINE PLAN

Ref: (a) CNO ltr Ser N865/9U654068 of 10 Aug 99

Encl: (1) AEGIS Baseline Plan for Cruisers and Destroyers
(2) ACDS/SSDS Mark 2 Baseline Plan
(3) CEC Baseline Plan
(4) Future Combat System Development

1. This memorandum supersedes reference (a) and provides guidance for the development, improvement, and implementation of combat system capabilities for AEGIS cruisers and destroyers, aircraft carriers, and large-deck amphibious ships (LHD 1 and LPD 17 classes). This plan implements the decisions made at the recent AEGIS and Ship Self Defense offsite conferences, and reflects the results of the FY03 DON Program Review (PR-03).

2. Surface ship combat systems must be fully integrated and interoperable in order to ensure they will continue to support the warfighter's ability to fight and win in the littoral and theater-wide battlefields of the future. AEGIS, ACDS, and SSDS, as the predominant surface warfare combat systems of the next quarter century, will provide the core of surface ship combat power and form the backbone for Navy network-centric warfare afloat. Therefore, these systems must continue to be rigorously engineered, robustly maintained and continually modernized to incorporate new warfighting capabilities.

3. Recognizing the realities of today's information technology environment, all surface combat systems must successfully transition to COTS-based computing equipment. While providing enormous potential for increased capability, this transition also presents new challenges which must be closely managed. In order to support modernization while controlling costs, combat systems must move towards an open, distributed architecture with maximum commonality across ship classes. In addition, a steadfast effort of COTS refresh (both hardware and software) must be instituted and maintained in order to adequately support these growing numbers of COTS-based combat systems.

5. In an era of constrained resources, fiscal trade-offs will continue to play a significant role in the decision-making process. In consonance with the CNO's readiness priorities, the maintenance of currently fielded warfighting capabilities will take the highest precedence, with the development of future baselines and new capabilities balanced within the resources available. AEGIS must be maintained and modernized to pace the threat, retain the capacity to accomplish assigned missions, and concurrently assume a major role in precision volume surface fires and Ballistic Missile Defense. SSDS will be fielded and maintained to support command and control and self defense requirements. With the increasing proportion of AEGIS ships comprising the surface combatant Fleet, the maintenance and modernization of these ships poses the greatest management task facing the Surface Warfare community and remains the central focus of the combat system baseline plan.

6. The following principles shall guide the execution of this plan:

- Introduce major new systems in forward fit, and enable backfit to the existing fleet whenever possible.
- Deliver new capability by battlegroup whenever possible.
- Using an open systems architecture approach, produce a system which is easy to maintain and modernize, and mitigates the cost of inevitable technology refresh.
- Additionally using an Open Architecture approach, use contributions of the Common C&D concept in building an interoperable, coherent tactical picture and implement SIAP requirements, as articulated by the JROC.
- Limit program-wide risk to moderate.

7. Enclosures (1) through (4) provide additional direction for continued development of surface ship combat systems, and are subordinate to the overall guidance provided above.

8. This plan will be updated annually by N766. Significant deviations will be formally documented by n76 memorandum. The N766 point of contact is CAPT Brad Hicks, N766, (703) 604-7676.

PHILLIP M. BALISLE
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Director, Surface Warfare

AEGIS Baseline Plan for Cruisers and Destroyers

The AEGIS fleet comprises over fifty percent of the Navy's combatant force, and in ten years, these systems will account for seventy-five percent of the surface Navy's combatant power. The maintenance and modernization of the growing AEGIS fleet remains one of the greatest tasks facing the Surface Warfare community. Recent meetings between the Program Executive Office for Theater Surface Combatants (PEO TSC) and the Director for Surface Warfare (N76) have focused on laying out a strategy to meet fleet warfighting requirements and the CNO's readiness priorities with an emphasis on enhancing the quality, delivery, and certification schedule of AEGIS baseline computer programs currently under development. Figure (1) illustrates the overall AEGIS Strategic Plan and highlights the continuing progression of warfighting capability.

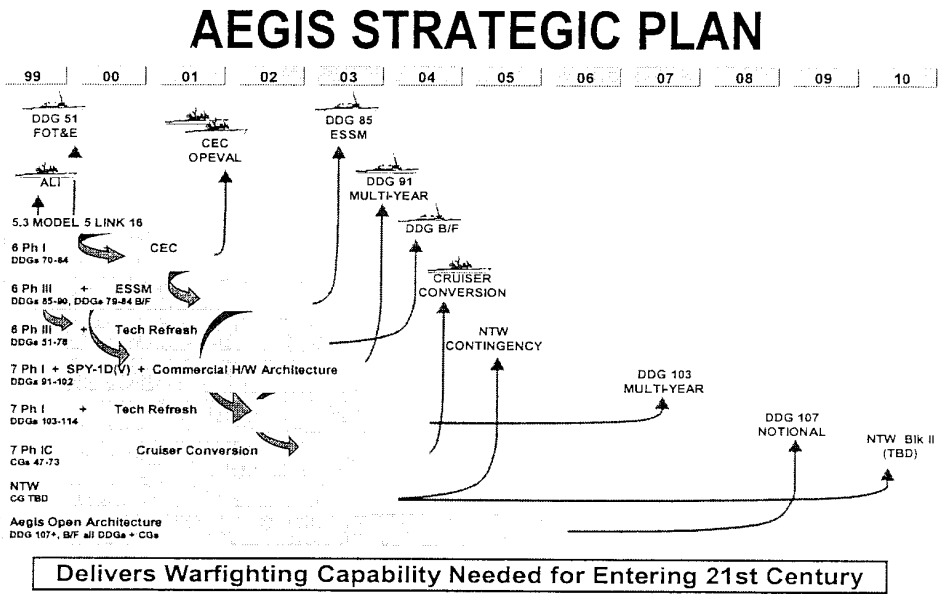

Figure 1

Specific goals of this strategy are:

- Develop AEGIS combat systems and associated computer programs which meet fleet littoral and area air defense warfighting requirements.
- Provide quality computer programs to the fleet. These computer programs should be free of significant defect, user friendly, and easily maintainable.
- Position the AEGIS Combat System to support future warfighting upgrades. To achieve this growth potential, develop future AEGIS baseline computer programs within an open systems architecture, incorporating tenets from the Common C&D concept. Additionally, development of an open systems architecture should mitigate effects of the inevitable COTS refresh.
- Develop AEGIS computer programs which meet fleet and joint interoperability requirements, supporting development of a coherent tactical picture and SIAP as defined by the JROC.

Immediate actions to achieve these goals and incorporate other recent Department of Defense decisions regarding Navy Area TBMD capability are outlined below.

- De-scope Navy Area TBMD Capability. In view of the recent cancellation by the Department of Defense of the Navy Area TBMD Program, de-scope the TBMD capability in current AEGIS baseline (B/L) computer program development programs (B/L 6.3 and B/L 7.1).

    - Since the AEGIS B/L 6.3, 7.1 and 7.1C computer programs are already well along in their development, de-scope of TBMD functionality should be done in a way that will not negatively impact the completion or non-TBMD performance of the B/L computer programs in accordance with prior plans, schedules, requirements.

    - If in the future a new AEGIS B/L requirement for a TBMD capability is specified, such capability shall be incorporated in an existing or new AEGIS B/L computer program such that there will be no impact to the planned computer program deliveries and certification schedules, or existing capabilities.

    - The AEGIS Linebacker User Operational Evaluation System computer program is not affected by the cancellation of the Navy Area-Wide TBMD Program. It shall be maintained in its current status for continued use as a test bed and contingency capability.

    - The Non-Tactical Data Collection (NTDC) patch shall be included in all AEGIS computer program baselines (i.e., AWS B/L 6.3 and B/L 7.1) that do not have an active TBMD capability.

- Reconstitute Close-In Weapon System Capability on Flight IIA Destroyers. The Phalanx Close-In Weapon System (CIWS) Block 1B shall be reconstituted aboard all non-CIWS equipped Flight IIA destroyers, beginning with the USS MCCAMPBELL (DDG 85). CIWS shall be integrated into the AEGIS Computer Program for each appropriate baseline, in addition to the Evolved Sea Sparrow Missile (ESSM) weapon system. The method and schedule of CIWS procurement and installation, and the extent of integration of the CIWS into the AEGIS B/L computer programs (i.e., minimum integration, full integration, or some option in between), shall be provided as part of POM 04.

- Cooperative Engagement Capability Fielding. Fielding of Cooperative Engagement Capability (CEC) is a priority. As discussed during recent meetings between PEO TSC and N76, a proposed hybrid computer program plan shall be implemented to support CEC fielding. This hybrid computer program, B/L 5.4, shall be a hybrid of existing AEGIS B/L 5.3 and B/L 6.1 AEGIS Weapons System (AWS) equipment and computer programs, and shall be evaluated for technical and programmatic feasibility. If feasible, this program shall be fielded on non-CEC equipped B/L 3 and 4 cruisers. Additionally, PEO TSC shall determine the feasibility of installing this program on non-CEC equipped destroyers (DDG

51 – DDG 78) with trade offs to consider when to commence B/L 7.1 or whether to wait for B/L 7.2. A consideration of whether to execute any or all of this DDG back fit program and how best to implement will be weighed against following:

- Impact of availability length and number of ships scheduled per fiscal year versus fleet deployment requirements.

- Best value – i.e., what is best long term for surface AEGIS fleet as it is better to wait for B/L 7.1 or defer to B/L 7.2 OA. Savings from deferral can be used to fund B/L 7.2 to achieve 2009 fielding.

Cruisers and destroyers currently scheduled for CEC installation in conjunction with existing B/L 6.1 or 6.3 computer program installations shall continue as planned. The previously planned, but not yet initiated, AEGIS B/L 6.1.7 computer program shall not be implemented.

- Develop Environmentally Based Weapons/Radar Performance Assessment Tools. Warfighters require environmentally based radar and weapons performance assessments to maximize the battlespace and optimally employ weapons and sensors. To achieve this required warfighting capability, AEGIS baseline development shall incorporate tools that provide volumetric characterization of the electro-magnetic environment via "Through the Sensor Means" in a phased approach. Two existing tools, SEAWASP and TEP, should be used to develop the final weapons/radar performance assessment system; however, in this phased approach these two systems may be installed separately in order to provide the warfighter a near term usable tool and support spiral development of a fully integrated tool. Initially rapidly fielding a stand-alone SEAWASP system will give warfighters immediate tools to help them understand their local environment and radar performance against low altitude threats. New construction destroyers and cruisers in the Cruiser Conversion program should get this system in conjunction with the SMOOS (R) installation. A combined or hybrid TEP/SEAWASP based system should be incorporated into SPY-1(D)V and B/L 7.1R efforts, and ultimately should provide local and distant evaporative and surface based duct radar performance as part of the AEGIS Open Architecture baseline. Actual fielding rates will be dependent upon funding levels and fleet availability.

- Use Quality Standard Metrics to Enhance Computer Program Quality. In order to enhance the level of quality of AEGIS B/L computer programs in the fleet, and to ensure that no AEGIS operator will be unable to perform his mission, PEO TSC shall implement a Quality Standard metric in the B/L computer program development process. This metric shall require the AEGIS B/L Computer Program Combat Systems Engineering Agent (CSEA) to ensure that computer programs delivered for fleet certification meet the following minimum standards as determined by the AEGIS Combat Systems Program Office (PMS 400B):

  - Zero R1-category computer program change requests (CPCRs); and
  - Between 100 and 500, R2-category CPCRs of any priority, with less than 100 being the objective.
  - The R2-category CPCRs remaining open at the time of CP delivery shall not significantly degrade any particular Aegis warfare or mission area, as determined by PEO TSC.

- Develop AEGIS Baseline Computer Program Assessment Milestones and Schedules. The AEGIS Technical Director (PMS 400B) shall identify assessment for each existing and new AEGIS B/L developmental computer program to the Networks Branch (N766). The assessment points shall provide insight into the scheduled performance and achievement of the quality standard metrics, as discussed above, in addition to the usual parameters of performance against requirements, risk assessment, etc. These assessment points shall be provided to N76 by 15 March 2002, for existing developmental AEGIS B/L computer programs. Updates to computer program development status shall be provided regularly, but not less than quarterly, and at any time PMS 400B intends to revise assessment points. As a result of implementation of the quality standard discussed above, the following computer program development schedules shall be revised as follows:
  - AEGIS B/L 6.3 computer program development schedule shall be extended 5 months from the Program of Record. The new schedule shall specify computer program delivery from the AEGIS CSEA to the AEGIS Lifetime Support Engineering Agent (LSEA) - that is, the Naval Surface Warfare Center/Dahlgren (NSWC/DD), in December 2002. NSWC/DD shall complete computer program certification efforts by NSWC/DD by December 2003. B/L 6.3 is planned for installation in DDG 85 – DDG 90 during new construction, and DDG 79 – DDG 84 as part of the DDG modernization and baseline consolidation efforts.
  - AEGIS B/L 7.1 computer program development schedule shall be extended 8 months from the Program of Record. The new schedule shall specify computer program delivery from the AEGIS CSEA to NSWC/DD in December 2003. NSWC/DD shall complete computer program certification efforts by December 2004. B/L 7.1 is planned for installation in all new construction DDGs beginning with DDG 91.

- AEGIS Cruiser and Destroyer Modernization Plans. Revised AEGIS cruiser and destroyer warfighting improvements are indicated in figures (2) and (3). These plans provide guidance and update the modernization plans listed in reference (a). The configurations listed in figures (2) and (3) are primarily focused on warfighting improvements, and may require some tailoring to meet individual ship configurations. Current modernization efforts plan to upgrade AEGIS cruisers to B/L 7.1C as part of the Cruiser Conversion program. AEGIS destroyers will be upgraded to B/L 6.3 and/or B/L 7.1 as part of the Destroyer Modernization program. Eventually, both cruiser and destroyers shall be upgraded to open systems architecture. Results of POM 04 decisions will determine exactly when and at what rate the open systems architecture will be fielded. Of note, the current plan to modernize the USS LASSEN (DDG 82) to the AEGIS B/L 6.3 computer program configuration shall be implemented even though B/L 6.3 certification schedules as revised above will not be completed prior to her forward deployment. Although DDG 82 currently has and will deploy with the AEGIS B/L 6.1, installation of applicable B/L 6.3 ship alterations that can be incorporated prior to deployment, without impacting the ship's capability and performance with the B/L 6.1 computer program, shall be performed. The objective of the pre-deployment effort is to facilitate installation of the remaining B/L 6.3 equipment and software as soon as possible after the computer program is certified.

Cruiser Modernization Plan

Applicable Ships	**CG 60 – CG 64, CG 67, CG 70, CG 72, CG 73 (Backfit)**	**CG 47 – CG 73 (3)**	**CG 47 – CG 73 (5)**
Baseline Description	Baseline 6.C (1) • AWS B/L 5.3.8 Functionality • CEC • CIWS 1B • SEAWASP/TEP (2)	Baseline 7.1C/7.1CR • AWS B/L 7.1 Functionality • CEC • ESSM • CIWS 1B • Radar Upgrades (4) • TTWCS • AADC (4) • 5"/62 Gun (BL 1 & 4 Ships) • MK 34 Mod 4 GWS/MK 160 mod 11GCS • SPS-49 MPU • NULKA • TISS • SPQ-9B w/ASMD • SARTIS • SQQ-89(V)15A • SEAWASP/TEP (2) • COTS Refresh (7.1CR)	AEGIS OA/Baseline 7.2 • AWS B/L 7.1 Functionality • Integrated Environmental RPA Tool • Open Systems Architecture • Improved Display System

Notes:

1. AWS B/L 6.C will consist of a hybrid of AWS 5.3/3A and AWS 6.1 for BL 3 and 4 cruisers. Primary focus is fielding CEC and upgrading CIWS to CIWS 1B.
2. SEAWASP/TEP installations should occur in phased approach, which may include separate stand alone, non integrated SEAWASP/TEP installations. Installations to occur as systems and funding permit.
3. AWS B/L 7.1C/7.1CR to be installed as part of Cruiser Conversion program.
4. Radar upgrades may include SPY-1D(V) SIGPRO for SPY-1A ships.
5. AEGIS OA installation to replace AWS B/L 7.1C/7.1CR when available.

Figure 2

Destroyer Modernization Plan

DDG 85 – DDG 90
DDG 79 – DDG 84 (Backfit)(2)

Baseline 6.3/6.3R

- AWS B/L 6.1 Functionality
- CEC
- ESSM
- SQQ-89(V)10 (DDG 79-84)
- SQQ-89(V)14 (DDG 85-90)
- Mk 34 mod 3 GWS/Mk 160 mod 10 GCS
- Integrated JMCIS
- BFTT/ACTS Rehost
- COTS Adjunct Processing
- CDLMS
- CADRT
- AEGIS LAN Interconnect System (ALIS) (DDG 85-90)
- NAVSSI Blk 3
- FCS STAMO
- SEAWASP/TEP (1)
- COTS Refresh (6.3R)

DDG 51 – DDG 78 (Backfit)(2)

Baseline 5.4

- AWS B/L 5.3.8 Functionality
- CEC
- CIWS 1B
- SEAWASP/TEP (1)

or

Baseline 6.3R

- AWS 6.3 Functionality
- AWS Cots Refresn
- CEC
- CIWS 1B
- SQQ-89A(V)15
- AEGIS LAN Interconnect System (ALIS)
- BFTT/ACTS Rehost
- NAVSSI
- Integrated JMCIS
- FCS STAMO
- CDLMS/C2P Rehost
- SEAWASP/TEP (1)

DDG 91 – DDG 107

Baseline 7.1/7.1R

- AWS B/L 6.3 Functionality
- CEC
- ESSM
- SPY-1D(V) with ORTS Mods
- TTWCS
- MK 34 Mod 2 GWS/MK 160 Mod 9 GCS
- Advanced Processing
- SQQ-89(V)15
- AIEWS Increment 1
- Remote Minehunting
- HAWKLINK Ku Band
- SEAWASP/TEP (1)
- NAVSSI Blk 4
- COTS Refresh (7.1R)

DDG 107 – DDG 113
DDG 51 – DDG 107 (Backfit)(3)

AEGIS OA/Baseline 7.2

- AWS B/L 7.1 Functionality
- Integrated Environmental RPA Tool
- Open Systems Architecture
- Improved Display System

Notes:

1. SEAWASP/TEP installations should occur in phased approach, whichmay include separate stand alone, non-integrated SEAWASP/TEP instaliations. Installations to occur assystems and funding permit.
2. Backfits fielding plans and schedules shall be determined through liaisonwith Fleet Commanders/Type Commanders, ship availability and funding levels.
3. AEGIS OA installation part of Destroyer Modernization program (TBD).

Figure 3

ACDS/SSDS Mark 2 Baseline Plan

The Advanced Combat Direction System (ACDS) Block 0 is the predominant Fleet combat system for today's aircraft carriers and large deck amphibious ships. The life-cycle maintenance of ACDS Block 0 and the incorporation of modest computer program improvements required to enhance battlegroup interoperability will have the highest priority for these ships. The downward trend of ISEA support for these programs will be reversed in order to adequately support the Fleet, including all requested training, ILS and CASREP responses and other Fleet requests for technical assistance. Additionally, software improvements will be made to:

- Address all High and Medium Severity Trouble Reports
- Address Designated Battlegroup Interoperability Deficiencies
- Restore the UYK-43 Executive Computer Program to Maintainable Status
- Upgrade to Model 5 JTIDS compatability
- Successfully complete Navy and Joint Link Certifications
- Accomplish SIAP SE Block 0 and Block 1 Fixes

ACDS Block 1, which failed OPEVAL in 1998, is currently installed on four ships: CV 67, CVN 68, LHD 1, and LHD 7. Due to its inherent design limitations, ACDS Block 1 will be retired from the Fleet on a priority basis. Minimum essential support for ACDS Block 1 will be maintained until the system is retired from the Fleet in FY06.

The Ship Self Defense System (SSDS) is the combat system of the future for all NIMITZ class aircraft carriers and the LHD 1 and LPD 17 ship classes. SSDS is a physically distributed, open architecture computer network consisting of commercially available or previously developed hardware. It includes a command table and operator consoles using the Navy's AN/UYQ-70 standard display family for human-machine interface, commercially available local area network access units and circuit cards, and commercially available fiber optic cabling. SSDS, which will replace both ACDS Block 0 and Block 1 in the Fleet, performs the integration function for the detection and engagement systems on these ships as well as performing automated detection, quick reaction and multi-target engagement capability, emphasizing performance in the littoral environment.

SSDS Mark 2 will be fully integrated with CEC in all aircraft carrier installations. Because SSDS Mark 2 and CEC will be installed simultaneously and form the centerpiece of the CVBG network, Battle Group Tactics Techniques and Procedures (TTP) will be developed by SWDG for all CVBGs with SSDS Mk 2 and CEC and funded via the SSDS program.

For all LHD 1 class ships and LPD 21 and above, SSDS will be fielded independently of CEC. Required equipment and software changes as required should be incorporated to ensure SSDS will have full functionality if fielded on a ship without CEC.

SSDS MK2 will integrate other ship self defense systems including:

- AN/SPQ-9B radar
- AN/SPS-48E
- AN/SPS-49A
- Re-architectured NATO Sea-sparrow missile system

- Rolling Airframe Missile with HAS capability
- SLQ-32
- AIEWS (full integration)
- NULKA
- ESSM
- CIWS Block 1B

Additionally, SSDS Mark 2 will incorporate SIAP SE Block 0 and Block 1 changes, as well as designated Battle Group interoperability improvements.

The first priority for SSDS Mk 2 is development, integration, operational testing, and deployment certification for USS RONALD REAGAN (CVN 76) and USS SAN ANTONIO (LPD 17) in a forward fit configuration. SSDS Mk 2 will be back-fit to the remainder of the NIMITZ class aircraft carriers, incorporating improvements identified as a result of SSDS FOT&E onboard CVN 76. Development of the LHD configuration for SSDS Mark 2 will leverage LHD 8 new construction SCN funding. Changes required to backfit the LHD 8 configuration to LHDs 1 through 7 will be addressed with OPN and RDTEN as required.

SSDS Mk 2, as a distributed processing, COTS-based system, will require a robust COTS refresh process. The LPD 17 shipbuilding schedule will be the principle driver for the SSDS COTS refresh cycle. Additional COTS refresh required to support unique characteristics of the aircraft carrier backfit installations will leverage the RCOH installations.

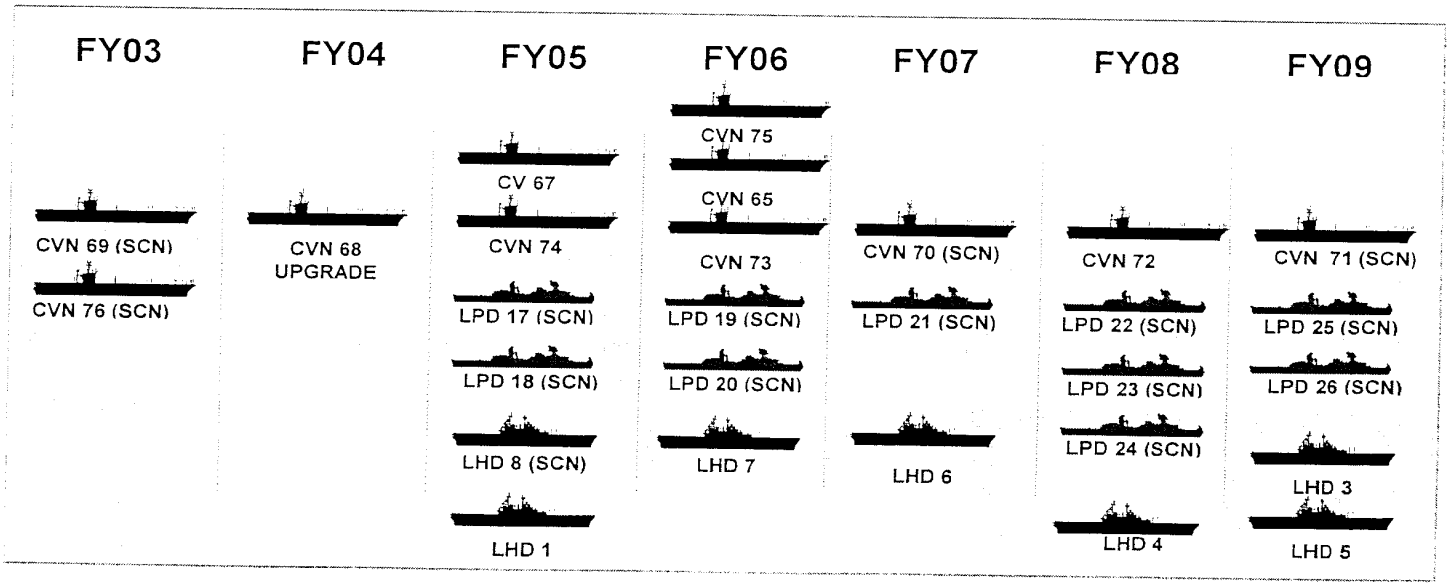

Figure 4: SSDS Mark 2 Fielding Plan

Future Combat System Development

The rapid infusion of advanced computing equipment and modern computer programs into our warfighting systems is an inherent part of our collective effort to transform our Navy. A pivotal corollary task is to engineer the convergence of today's independently designed Fleet combat direction systems into a single, common architecture. The Surface Warfare Directorate is committed to the development and fielding of a standard, open-architecture combat direction system to form the common core of all Fleet combat systems.

A convergence of imperatives is driving this need. Evolving naval missions such as Land Attack and Theater Ballistic Missile Defense, as well as the design of revolutionary new ship classes such as DD(X) and CVNX will drive combat direction system design to new limits. In an era of increasingly scarce resources, the development and life-cycle maintenance of ever-increasing numbers of combat direction systems and their associated baselines will simply not be affordable. Therefore, a process to rapidly jump-start the transition to the next-generation combat direction system is required.

As the first step, Director, Surface Warfare (N76) has developed a Capstone Requirement Document for future Navy Combat Systems. This document lays out the top-level requirements and essential functions of all future Navy Combat Systems for surface ships and formalizes the requirement for a high performance, interoperable, net ready combat system architecture.

AEGIS Development

Existing AEGIS developments, although leveraging COTS computing hardware technologies, remain severely constrained by legacy software architecture. AEGIS Baseline development will introduce an Open Architecture (OA), high performance, interoperable, net ready system, including rearchitected computer programs, to the AEGIS fleet. AEGIS OA will address future warfighting requirements such as the JROC-defined SIAP, integration of JCTN, etc., and will use the NSWCDD HiPer D testbed and lessons learned.

As risk mitigation, AEGIS OA will be targeted for a forward fit. The development will be performed outside critical path new construction ship milestones to decouple development risk from fixed ship schedules.

Following initial delivery and operational testing in a forward fit configuration, AEGIS OA is planned for backfit to the majority of the AEGIS fleet. The COTS computing plant planned for the next DDG multi-year procurement will support AEGIS OA as a back-fit when it is ready for delivery. This baseline will then be immediately available for backfit to all Baseline 7 ships as part of their next technology refresh cycle. Remaining AEGIS ships, not currently programmed for Baseline 7 hardware architecture, will be planned for future modernization.

SSDS Development

Unlike AEGIS, the SSDS Mark 2 system is being developed with an open software architecture using a distributed COTS computing plant. Based upon current development timelines, it is anticipated that the SSDS Mk 2 development effort will provide an initial open architecture baseline for aircraft carriers and the LHD 1 and LPD 17 classes. These baselines will serve as the integration path for the Joint SIAP and JCTN, as discussed above.

Commonality

It is expected that common AEGIS OA modules and algorithms will be developed to be incorporated into both AEGIS and SSDS Mk 2 combat systems to satisfy these future requirements. These common components will be developed with the requirements of CVN, LHD, LPD, and other future surface ship combat systems in mind, and with the intent of exporting these modules to other ships upon successful implementation in AEGIS. PEO TSC, as the executive office for the AEGIS program as well as the ASN RDA appointed ship self defense combat system engineer will oversee AEGIS OA.

While the AEGIS OA will be closely integrated with AEGIS baseline development, it will be maintained as a separately funded project within the AEGIS K1447 R&D line, in order to maintain enhanced visibility into this important Surface Warfare multi-ship class effort.

Top level requirements for AEGIS OA will be provided in the form of an OPNAV promulgated Combat System Capstone Requirements Document. This document will draw heavily on Common C&D architecture definitions of the past years and will guide both the AEGIS and SSDS Mk 2 future development efforts. The context diagram for surface ship combat systems as articulated in the CRD is shown in Figure 5.

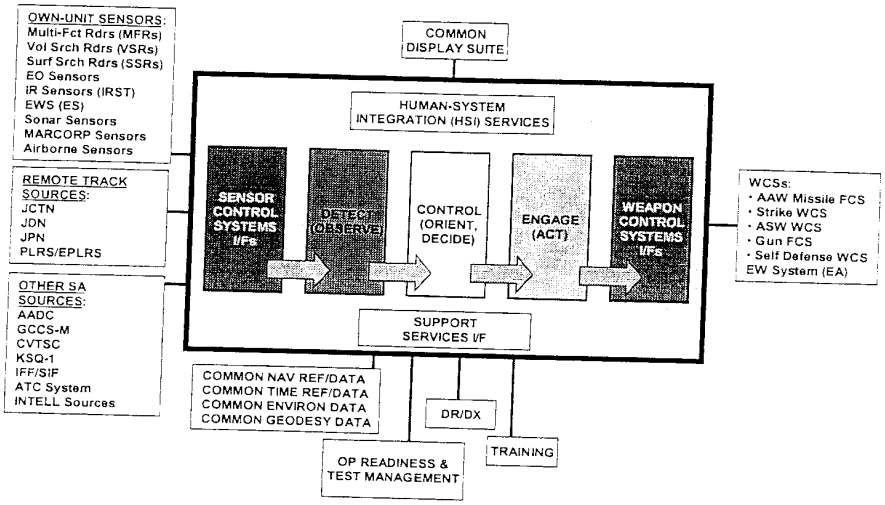

Figure 5. Context for Navy Combat System AEGIS OA = HYPERION

The Capstone Requirements Document (CRD) will describe the operational need for the development of a Navy battle force family of combat systems that offer commonality in operational context, the allocation of functions, sensor data fusion and correlation processes, unit-to-unit exchange of information, weapons coordination and integration, and the decision-making process. AEGIS OA will result in a consistent and common implementation of unit combat system control, force command and control (C2), and decision-making functional capabilities that will be developed for use in surface, air, and undersea units of the naval battle group and battle force. Commonality will be employed where capabilities and functionality are shared; however, AEGIS OA additionally supports all unique capabilities of mission-specific units.

AEGIS OA will support improved unit and force situational awareness, decision-making, and interoperability through:

- The integration and fusion of local (own-unit) multi-spectral sensors, discriminators, and their associated data
- Sensor netting [e.g., as envisioned by the Joint Composite Tracking Network (JCTN)] to exploit all force sensor vantage points
- Local-to-remote sensor data/information fusion and correlation
- Composite tracking and identification
- Control and integration of own unit and force resources/weapons, i.e., force weapons coordination, allowing massed force effects